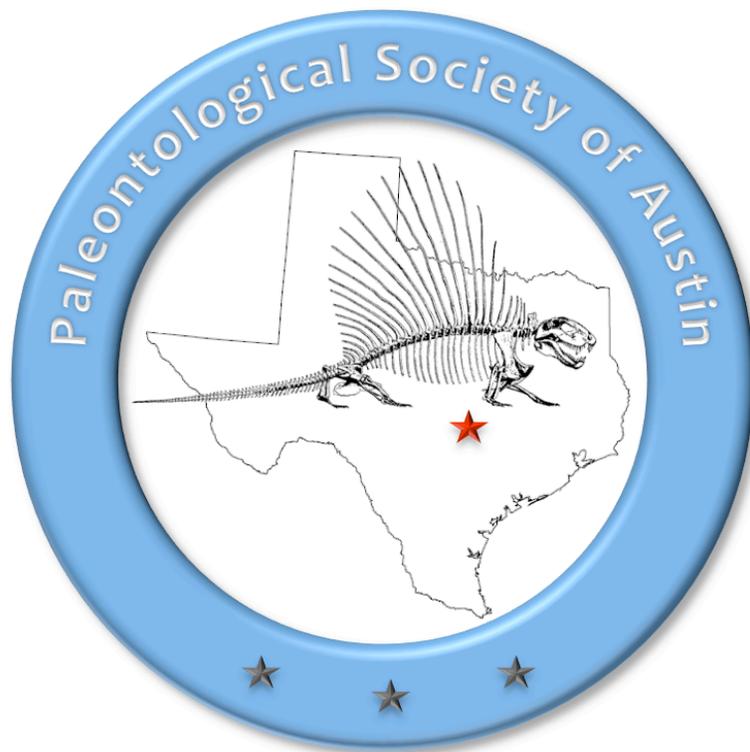


Paleo Footnotes

Newsletter of the
Paleontological Society of Austin

Austin and Central Texas



Volume 7, Number 3
March 2012

President's Note

We had a great turnout in Jacksboro for the last field trip. It started cold but warmed up quickly in what was one of the sunniest days of the year so far. Emelia and I left Austin at 3:45AM and were there by 7:45. Driving at that hour is a pleasure: no traffic, set it on cruise and just keep a heads up for deer and armadillos. When the sun starts to poke up you know you are almost there. We couldn't stick around for day two so we headed out just after 5PM and were home by 9:15. It was a long day but I still couldn't sleep until I had at least cleaned a bag or two of my finds and sorted out the special finds for the day. And I had a few! I'll bring what I found to the next meeting for show and tell.

We have another very interesting lecture lined up for the March meeting so be sure to attend. The meeting will also have occurred after our next field trip. I'm sorry I will miss that one but I will be about a thousand miles further east visiting family and colleges. I'm sure there will be some great fossils and stories to tell by those who go.

See you at the next meeting.

-- Erich



Pennsylvanian treats from Lake Jacksboro. The film cans contain several shark teeth. ER

Next Meeting
Tuesday March 20, 2012

7:00 p.m. at the Austin Gem and Mineral Society building
6719 Burnet Lane, Austin, TX

The Cambrian explosion and Ordovician Biodiversification
Field work in soft bodied fossil localities
in North Greenland and Morocco

Jakob Vinther

The Cambrian explosion marked the rapid divergence of diverse and macroscopic animal life in the Early Cambrian. This is documented in numerous fossil localities around the world. Some have become infamous for their extraordinary preservation of soft-bodied preservation, such as the Burgess Shale and the Chengjiang biota. These localities give an extraordinary glimpse into a world of animals not usually recorded in other deposits and can help us to understand the radiation of animals and how the modern groups evolved piecemeal from each other.

I have been part of a team exploring an important Early Cambrian locality in North Greenland called Sirius Passet. This locality preserves numerous fossils with soft tissues such as the soft cuticle, gut and muscle tissue and record several important fossil stem groups, which has been important to reconstruct the evolution of marine invertebrates.

After the Cambrian there was a marked ecological diversification in the Ordovician, which gave rise to an abundance of skeletal organisms and niches more similar to the extant world. While the Great Ordovician Biodiversification Event is well recorded in the abundant skeletal fossils, little is known about soft-bodied animals at this time due to the lack of appropriate localities. We have now found a locality in Morocco, which yield extraordinary soft bodied fossils and show that many animals that were thought to be unique Cambrian wonders

Jakob Vinther is a Danish post-doctoral researcher at UT Austin that recently graduated with a PhD from Yale University. He works on soft-bodied fossil preservation and evolution of animal body plans using the fossil record and molecular biological techniques. Jakob has also been involved in developing techniques to put colors on extinct birds and dinosaurs by studying fossil melanosomes. Currently he is working as a post-doc at the University of Texas, Austin.

Next Field Trip
Saturday & Sunday, March 17th & 18th, 2012
(BEFORE THE NEXT MEETING)

East Texas Eocene Marine

We will meet at 8:00 on Saturday the 17th at O'Reilly Auto Parts on N. University Dr. in Nacogdoches. Go north on Business 59 to E. Main St. (Highway 21) and turn right (east) and go approximately 9 blocks. At the intersection of University Dr. turn left and go a short distance and see O'Reillys on your right. This can be a collection site but it will be just a meeting place to caravan from this time. We will be collecting Eocene invertebrates both Saturday and Sunday. We will be in the San Augustine area all day Saturday and back in the Nacogdoches area for Sunday. Much, but not all of our finds will be small - so sectional boxes will be useful. Bring lunch and water and the usual collecting materials. Watch the weather and dress accordingly. It should be a really good spring trip with dogwoods and other things in bloom.

February 2012 Meeting Minutes

The meeting was called to order.

Marilyn Austin introduced our guest speaker Dr. Ernie Lundelius. His presentation was titled "Origin of the Australian Mammal Fauna: What the Fossil Record Shows."

When the Europeans first explored Australia they found the monotremes, echidna and platypus. These animals are warm blooded, have hair, lay eggs and feed their young milk. Preserved animals sent back to Europe where at first considered hoaxes.

The Europeans also found marsupials, wallabies, kangaroos etc. Many of the marsupials evolved to fill similar niches as non-marsupials had on other continents. For example the Tasmanian Tigers skulls were very similar to a wolf's skull. There are sugar gliders that are similar to Flying Squirrels and the wombat is similar to the ground hog.

The fossil representatives of the predecessors to these animals were discussed. The following were found during

the Pleistocene. The Diprotodon, meaning "two forward teeth", was the predecessor to the wombat. There were large, long armed kangaroos with sheering teeth (possibly carnivores). There was also a marsupial lion.

During the Eocene the fossil record contains lots of jaws and teeth many of which were marsupials. These do not however seem to be connected with current marsupials.

The Miocene platypus is very close in form to the extant platypus.

A break was taken.

Business:

Prior minutes were approved.

Treasurers Report:

\$300 has already been donated for the scholarship fund. R. C. Harmon donated \$50. His employer (IBM) offers a matching donation.

Checking \$17,887.27
Savings \$5,352.60
Total \$23,239.87

Treasurers Report was approved.

Fossil Fest Committee:

Fossil Fest still needs more volunteers. This committee will have its first meeting March 6th. Call Suzanne if you want to volunteer.

Fossil Fest door prizes have been purchased. They include a large polished ammonite.

Fossil Mania:

The club voted to not participate in this show going forward, it will not be financially feasible. In the past the PSoA volunteers were paying many of the expenses out of their own pockets (Thanks Folks for your unheralded donations!)

Grant Committee:

The committee has not met recently. We do however have an applicant, Linda McCall. The grant committee will decide on cutoff dates and report back to the club.

Long Range Financial Committee:

Chairman is Ron Root. Other members are Fredrick Falk and Bill Hill. The committee will make recommendations for the clubs long term fiscal planning.

Other:

Ryan Galligher has consented to give his award winning science presentation at the next club meeting. Thanks Ryan!!!

There was a request for a volunteer at the Goddard School in Leander on the morning of June 21st. Melinda Faulk volunteered.

Mike Smith announced the new domain name for the club is austinpaleo.org.

New emails were set up for club board members. They follow the pattern of Position@austinpaleo.org (EX. President@austinpaleo.org).

Mike also set up a new distribution list to send emails to all club members. This is separate from the newsletter distribution list. This will be used for officers to send information to the club. For example this distribution list could be used to send out last minute field trip changes. To be included on this list you must respond to an email Mike sent out. The subject line was "Request for confirmation of subscription to the mailing list [psoamembers@austinpaleo.org]". If you did not get this email please contact Mike. Note that the sender of the email could have been "majordomo".

The upcoming field trip to Jacksboro was announced. We will meet at 8:00 am at the courthouse.

We do not have a final date for the Ash Grove field trip.

The list of field trips was announced:

- 2/25 Jacksboro
- 3/17 East Texas
- 4/21 Auction
- 5/19 Whiskey Bridge
- 6/23-24 Oklahoma
- 7/21 Houston Natural History Museum
- 8/25 Brazos River
- 9/22 Harker Heights
- October (date TBD) Lake Texoma
- 11/24 TBD
- 12/1-2 Fossil Fest

Door prizes were awarded.

Meeting was adjourned..

February Field Trip Report Lake Jacksboro & Vicinity

It was a cold clear morning for the beginning of my favorite trip, the Jacksboro spillway, and we had 24 members present, including myself. Jeff Doerzbacher, Glenn Tutor, David Lindberg, Erich and Emelia Rose, Kevin Bills, Virginia and Howard Friedman, Ron and Janet Root, Gary and Cathy Rylander, Dennis and Morgan Stock, Will and Chantal Berczovytsch, Francis, Timothy and Karen Lamphier, John Hinte, and John and Susan Philpott.

The Finis Shale is considered the “core” facies within a transgressive-regressive cycle and is bounded by limestone layers. The long hill we collect on is capped by the Jacksboro Limestone. The Finis and the Jacksboro are the lowest members of the Graham Formation, as well as the oldest units in the Cisco Group, upper Pennsylvanian. To say that this shale is fossiliferous is an understatement. A great variety of well-preserved species can be found here. I've recently been trying to bring order to my collection from the Finis and have 30 different species of brachiopod, 6 different corals and at least a dozen different cephalopods – and there is a lot more out there that I've yet to find. There are few sites around with that kind of abundance.....not just with large numbers of fossils, but with large numbers of different species. The Finis is a treasure and each time you go you will find something new. I was a poor trip leader that day – I put my nose to the ground and didn't look up. I didn't see all that was found. I know that quite a few people found conularids. Gary picked up the largest (beautiful) *Neospirifer cameratus* I've ever seen. Erich and Melvin picked up the unusual *Paleacis* coral. And I believe it was Susan that showed me a brach in matrix and it had a scaphopod (*Plagioglypta*) nicely laid out next to it. Melvin and I both collected some of the micromorph cephalopods, with nice *Eoasianites* as the most common. My find of the day was a good specimen of *Derbia cymbula*, my first.

We started out Sunday morning in Mineral Wells and our first stop was the Union Hill roadcut. This is the Salesville Shale, Whitt Formation, Strawn Group and while the pickings are meager, there is always something unusual found. There are always wonderfully preserved bivalves (*Nuculopsis* and *Yoldia*) as well as gastropods. Gary said that he had found some of the “wasp nest” corals – a tabulate coral called *Michelina* sp.. I thought I had done well in picking up a rostroconch (*Apotocardium*), my first from this site. Then Melvin walked up with a complete cup of the non-sessile crinoid *Paragassizocrinus tarri*. We all pick up the fused infrabasal plates and call it a cup, but his had two more rows of plates on top of that. Really very pretty.

Our next stop was on Highway 337 and was the Wynn Limestone, Graford Formation, Canyon Group. At first there was some grumbling about not finding anything (wait – that was me) but after just a few minutes specimens started showing up everywhere. We were all finding a really pretty gastropod with bumps all over the living chamber called *Trachydomia nodosa*. I found several more species of gastropod that I had never seen before. Lots of brachs and some horn corals I have no name for. Gary and I both picked up small pieces of the colonial coral *Cladochonus* sp. Our numbers had dwindled down to Kevin, Melvin and I and Kevin wanted to go to the Mineral Wells Fossil Park. I wasn't sure I could give good enough directions, so I just took him there. Melvin and I stayed there long enough for Kevin to find a nice trilobite and me to find a conularid, then Melvin and I returned to the 337 site which we hunted until dark. I finished out the day by picking up a couple of nice 3-D hand specimens of the colonial coral *Syringopora*. Melvin went to the top of the outcrop and picked up a nice trilobite on a small slab (*Ameura*

major?) and a huge, nearly complete colony of *Syringopora*. We're going to have to start leaving Melvin at home.

All in all, a really great weekend! I believe everyone had a great time with beautiful weather, great outcrops and a good group to hunt with. Hope to see you in East Texas on the 17th.

---Ed



Just above the lake at the edge and out on the flats, Lake Jacksboro spillway.



A cold start, 8AM Saturday morning. One of Sunday's road cuts.



Melvin's *Paragassizocrinus tarri* and some of Kevin's better finds.

Photos by Ed Elliot, Virginia Friedman & Erich Rose

The purpose of the **Paleontological Society of Austin**, a 501(c)(3) non-profit organization, is the scientific education of the public, the study and preservation of fossils and the fossil record and assistance to individual, groups and institutions interested in various aspects of paleontology.

Meetings of the **Paleontological Society of Austin** are held the third Tuesday* of each month, 7:00 p.m. at the Austin Gem and Mineral Society building, 6719 Burnet lane, Austin, TX. The public is cordially invited to attend. See web site for April & December dates.

Annual Dues: \$18/individual, \$24/family and \$12/associate (non-voting, receiving newsletter) Send to: Treasurer, Paleontological Society of Austin, PO Box 90791, Austin, TX 78749-0791

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The Paleontological Society of Austin is a member of and affiliated with:

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DATED MATERIAL – MEETING NOTICE

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